



ORWH-Supported Career Development and Mentoring Programs

**Office of Research on Women's Health
Office of the Director
National Institutes of Health**



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Extramural and Community Programs

Building Interdisciplinary Research Careers in Women's Health (BIRCWH)

The Office of Research on Women's Health (ORWH) developed the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) Program utilizing the NIH K12 institutional mentored career development award. BIRCWH supports research career development of junior faculty members who have recently completed clinical training or postdoctoral fellowships, and who are beginning basic, translational, clinical, and/or health services research related to women's health. The junior researchers are paired with senior investigators to promote career development. ORWH has issued four BIRCWH RFAs since 2000, and has supported 29 centers with 35 awards. To date, 287 scholars (75% female) have been trained and many have gone on to receive NIH awards and academic positions. The scholars have produced over 827 publications and 782 abstracts and successfully competed for over 90 NIH grants. ORWH cofunds the BIRCWH program with the Agency for Healthcare Research and Quality and several NIH institutes including the National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute of Child Health and Human Development, the National Institute of Arthritis and Musculoskeletal and Skin Diseases, the National Institute of Aging, the National Institute of Mental Health, the National Institute of Neurological Disorders and Stroke, the National Cancer Institute and the National Heart, Lung, and Blood Institute.

Training Program in Health Policy for BIRCWH Fellows

This program, held for the first time in November 2006, was designed to provide BIRCWH scholars with a solid understanding of the health policy legislative process in Washington. The training consisted of a day-long event conducted by the George Washington University Department of Health Policy Faculty in the School of Public Health. Congressional and administration staff members provided vital information on the legislative funding process.

ORWH/NIH Reentry Program

The ORWH/NIH Reentry Program helps fully trained scientists (women and men) re-establish their careers in biomedical or behavioral science after taking time off to fulfill familial responsibilities. The Reentry Program provides administrative supplements to existing NIH research grants for the purpose of supporting full- or part- time research by women or men reentering the scientific workforce. The program is designed to bring the reentry scientist's existing research skills and knowledge up to date, so that, at the completion of the supplement, the scientist will be in a position to apply for a career development or research award. In 1995, the first three years of the ORWH Reentry Program were evaluated. All awardees felt that the Reentry Program award advanced their long-term career goals and both mentors and awardees found the ORWH Reentry Program to be an effective vehicle for increasing awardee expertise in a broad range of skill areas, including laboratory techniques, writing proposals and applications, and budgeting. Since 1992, this program has allowed for the reentry of 126 scientists (over 90 % women) into academic research at institutions throughout the country who might otherwise have been lost because they didn't follow the traditional pathway.

Achieving Excellence in Science (AXXS)

ORWH, in conjunction with The American Society for Cell Biology (ASCB) and the National Institute of Environmental Health Sciences, convened the Achieving Excellence in Science (AXXS) '99 workshop to explore the roles of basic science societies in advancing research by building the careers of all women in science, from the predoctoral stage to the senior scientist level. The workshop was held in December 1999, as a satellite meeting to The ASCB's Annual Meeting in Washington, DC. More than 140 participants representing more than 50 scientific societies, organizations, and government agencies gathered to develop action items that societies could consider for their membership; contribute to an annotated bibliography of the career resources that could be made available as a national resource on the Internet; and exchange information with other workshop participants on the strengths and weaknesses of existing and planned societal programs and resources for their women members. The full report on AXXS '99 is available on-line at <http://www4.od.nih.gov/axxs/>. Following the AXXS meeting, ORWH developed, designed, launched, and now maintains an AXXS web page, which serves as a primary resource for women in biomedical sciences

As a followup to the AXXS '99 workshop, ORWH supported AXXS 2002, a 1 ½ day workshop to gather representatives of clinical societies and discuss ways for the societies to enhance the participation of women scientists in the clinical research workforce. Focus was placed on identifying initiatives and action items that clinical societies could adopt, ways for clinical societies to disseminate successful strategies, and ways to collaborate among societies. The workshop, held by the Committee on Women in Science and Engineering (CWSE) of the National Academy of Sciences, discussed: initiatives and action items clinical societies can adopt within their organizations to enhance women's advancement in the clinical research field; ways for clinical societies to disseminate successful strategies to advance women's careers; and ways that clinical societies can collaborate to promote women's contributions to their fields. The full report of AXXS 2002 is available on-line at <http://www4.od.nih.gov/axxs/>.

Association for Women in Science Annual Seminar Series

The Association for Women in Science (AWIS) is dedicated to achieving equity and full participation for women in science, mathematics, engineering and technology. The Bethesda Chapter of AWIS was formed in 1991 and has grown to over 150 members. Its members are actively engaged in scientific research, education, administration and policy activities, and are employed in federal agencies, academia, business, and non-profit organizations. ORWH provides support for its yearly seminars on the NIH campus focused on career development for women.

American Society for Cell Biology Women in Cell Biology

Women in Cell Biology (WICB) is a long-standing committee of the ASCB that provides year-round career support and advice. WICB responds to reports of discriminatory practices, offers a speaker referral service to help program organizers identify women speakers, and produces monthly columns for the ASCB Newsletter. In addition, WICB has a traditional presence at the American Society for Cell Biology Annual Meeting, providing networking and workshop opportunities, which ORWH has supported for many years.

WISH-net

WISH-net (Women in Science and Healthcare Network), a portal website dedicated to girls and women interested in the field of science, provides resources to support and encourage girls and women who may otherwise be discouraged from pursuing a career in the sciences, was developed by the Public Responsibility in Medicine and Research (PRIM&R) organization and the ORWH. WISH-net seeks to inspire, mentor, and connect girls and women of all ages in science and healthcare. Throughout the site, WISH-net serves as a vehicle for stimulating and sustaining interest in scientific careers among school-age girls; encouraging women who are pursuing scientific study in college, doctoral programs, or post-doctoral fellowships or training; and supporting the commitment of women who are working in biomedical fields. WISH-net also promotes education, resources, professional and personal development, inspiration, and mentoring to girls and women of all ages and in all stages of their scientific journeys. <http://wish-net.od.nih.gov/>.

ORWH / Office of Science Education

Women are Scientists Video and Poster Series

These colorful, informative videos and posters were designed for middle-school students by the NIH Office of Science Education (OSE), in collaboration with and support from the ORWH. The series is designed to stimulate the interest of girls in science at a time when they are choosing academic courses that may affect their career options later. In the middle-school years, many girls are discouraged from pursuing advanced levels of study in math and science. This series is intended to make them aware of the many interesting and rewarding careers in the medical sciences and the educational requirements necessary to pursue them. The Women are Scientists video series consists of five videos, Women are Surgeons, Women are Pathologists, Women are Researchers, Women Scientists with Disabilities, and Women are Dentists. The fifth video, Women are Dentists, will be released in 2007. All will be available on DVDs. For more information, see <http://science.education.nih.gov/women/scientists/index.html>.

Careers in Science, Women in Research Poster Series

The NIH OSE, supported by the ORWH, designed a series of free posters and a companion website, aimed primarily at middle-school girls. The series emphasizes that science and medical research offer many different career paths, all of which are excellent opportunities for women. They feature careers in neuroscience, heart disease, and cancer research. The posters have been especially popular at teacher conferences, where there is a dearth of materials that focus on women in science. The Careers in Science, Women in Research Poster Series consists of three posters, Women in Neuroscience Research, Women in Heart Disease Research, and Women in Cancer Research. For more information, see <http://science.education.nih.gov/women/careers/index.html>.

Minority Faculty Student Partnership Program (MFSP)

ORWH supports Bio-Trac workshops for the Minority Student Faculty Partnership Program Initiative. These workshops are part of the Foundation for Education in the Sciences, Inc. educational program that includes a series of one-week lecture and “hands-on” laboratory training workshops in different areas of biotechnology that are topical and in demand. The

participants in the Minority Faculty Student Partnership Program gain new insights into the current thrust of biotechnology that they are able to take back to their institutions and integrate into their programs. In 2006, twenty-four participants from 11 different colleges and universities participated in these workshops.

NIH/ National Medical Association Partnership Travel Award Program

ORWH supports the NIH/National Medical Association (NMA) partnership committee in providing travel awards to support medical residents and fellows from underrepresented groups who are interested in academic medicine to attend the Annual Convention and Scientific Assembly of the NMA. The awardees participate in a special two day academic skills workshop held in conjunction with the Annual Convention and Scientific Assembly. The topics of the workshop range from how to write a grant to improving time management skills. The intent of this award is to enhance the scientific careers of residents and fellows of all medical and surgical specialties that are considering an academic career, and also to encourage research in disease areas that disproportionately impact the health of underserved communities.

Women's Reproductive Health Research Career Development Program

The Women's Reproductive Health Research (WRHR) Career Development Program was jointly developed by the National Institute of Child Health and Human Development (NICHD) and the ORWH in 1998. These institutional career development awards use the K12 mechanism to support research career development of WRHR Scholars, who are obstetrician-gynecologists that have recently completed postgraduate clinical training, and are commencing basic, translational, and/or clinical research relevant to women's health. The goal of this initiative is to promote research that will benefit the health of women by bridging clinical training with research independence, increasing the number and skills of obstetrician-gynecologist investigators at awardee institutions through a mentored research experience leading to an independent scientific career addressing women's reproductive health concerns. Since 1998, a total of 117 scholars have been appointed to the program. A new national WRHR website is hosted by the University of Rochester WRHR Program at <http://www.wrhscholars.org/>.

NIH Director's Pioneer Award (NDPA)

The NDPA supports individual scientists of exceptional creativity who propose pioneering approaches to major challenges in biomedical and behavioral research. The NDPA supports individuals who intend to pursue new research directions that are not already supported by other mechanisms. In FY2006, ORWH provided full funding to one of the NDPA recipients, Rosalind A. Segal, M.D., Ph.D. of the Dana-Farber Cancer Institute. She is an associate professor of neurobiology at Harvard Medical School and a member of the Department of Pediatric Oncology at the Dana-Farber Cancer Institute. Segal received a Ph.D. in cell biology from Rockefeller University in 1985 and an M.D. from Cornell University Medical College in 1986. Her laboratory focuses on the biology of brain tumors by probing the complex molecular machinery of the developing brain. Segal's research aims to understand the mechanisms critical for normal development of the nervous system and how deregulated proliferation, migration, and survival of cells can cause brain tumors and other neurological diseases.

Intramural Programs

Women's Health Fellowships in Interdisciplinary Women's Health Research (Public Private Partnership)

The ORWH and the NIH Intramural Program for Research on Women's Health (IPRWH) announced the selection of the first recipients of the NIH Women's Health Fellowships in Intramural Women's Health Research in 2006. These fellowships are funded through the Foundation of the NIH, with donations from Batelle and AstraZeneca, as the result of a new public-private partnership.

The Shared Postdoctoral Fellowship, supported through a donation from Batelle was awarded to Suzanne C. O'Neil, Ph.D., who is performing research jointly at the National Human Genome Research Institute's (NHGRI) Social and Behavioral Research Branch and the National Cancer Institute (NCI). The Clinical/Translational Fellowship, funded through a donation from AstraZeneca, was awarded to Shannon K. Laughlin, M.D. of the Epidemiology branch of the National Institute of Environmental Health (NIEHS) in Research Triangle Park, North Carolina.

ORWH/NICHD Graduate Partnerships Program Fibroid Fellowship

The ORWH/NICHD Graduate Partnerships Program Fibroid Fellowship was established to provide for the support of continued studies of uterine fibroids. This fellowship was awarded to Chantal Mayers, who is participating in the Johns Hopkins University Graduate Partnerships Program. The Graduate Partnerships Program (GPP), established in 2000, links the NIH Intramural Research Program with PhD programs at U.S. and international universities. Chantal Mayers is a graduate of Salisbury State University, where she discovered her interest in research. After graduation she sought and was awarded one of the highly competitive postbaccalaureate Intramural Research Training Awards with Dr. James Segars in the NICHD. After three years of research with Dr. Segars and colleagues at the Uniformed Services University of the Health Sciences, Chantal joined the Johns Hopkins Graduate Partnerships Program to pursue her Ph.D..

ORWH/Office of Loan Repayment

Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds (UGSP)

Since 2000, the ORWH has supported many UGSP scholars from disadvantaged backgrounds who have been competitively selected from a nation-wide pool of candidates. The NIH Office of Loan Repayment and Scholarship awards an average of 15 scholarships each year through the Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds to candidates who exemplify measurable development in their biomedical research careers, evidenced, in part, through their academic achievements and research accomplishments.

ORWH/Office of Intramural Training and Education (OITE)

Fellows Award for Research Education (FARE)

The FARE program was established by the NIH Fellows Committee in 1994 as a mechanism for promoting and recognizing research excellence in the intramural program. All graduate students

and postdoctoral fellows with less than five years total research experience at the NIH are encouraged to submit abstracts to the FARE competition. The abstracts are evaluated anonymously by study sections composed of tenure-track and tenured NIH investigators, prior FARE winners, and other fellows, on the basis of scientific merit, originality, experimental design, and overall quality. The first authors of the top twenty-five percent of the abstracts in each study section are recognized as FARE winners and receive a \$1000 travel award to be used for presenting her/his work at a scientific meeting. ORWH provides funding for 25% of the awardees.

Survival Skills Workshop

The ORWH supports the OITE Survival Skills Workshops for NIH postdoctoral fellows that address the topics of CV/resume writing, job interviewing, negotiating a job offer, grant writing, and establishing a laboratory.

Career Series on Biomedical Research Careers

The ORWH supports this career series provided by OITE that consists of panels of experts in career fields for which a biomedical research background is essential, including biodefense, teaching, patents, and technology transfer. The speakers for the career series are all former NIH fellows who can offer them up-to-date information and networking contacts for traditional and alternative biomedical research careers.

Speaking about Science and Advanced Speaking about Science Courses

The OITE Speaking about Science course is supported by the ORWH and is offered three times per year as a 4-5 week course. Participants learn how to become an “A+” speaker, excel in job interviews, and maximize the use of visual aids when making scientific presentations. An advanced Speaking about Science course was offered twice in 2006, and created a forum for in-depth, individualized assistance to each participant, which was very useful for the participating postdoctoral fellows.

Writing about Science Course

The OITE Writing about Science course for postdoctoral fellows is offered three times per year as a 4-5 week course and is supported by the ORWH. Taught in a workshop format in morning and evening sessions, this course instructs fellows how to write articles suitable for publication in peer-reviewed scientific journals. Participants learn how to write a research paper using their own laboratory data. During the course, they critique the work of others, learn about responsible authorship, review the process of publication, and learn how to deal with editors and reviewers, and discuss other issues related to scientific writing. Participants in the course are required to have at least one year of experience in an NIH laboratory and have compiled sufficient data for use in writing a scientific paper.

Improved Language Skills Course

The ORWH supports the OITE Improved Language Skills course, which is offered to first year visiting Postdoctoral Fellows, to enable them to improve their English skills necessary for future professional development. This course, which provided so popular that it was offered twice in 2006, covers scientific vocabulary, diction, articulation, verbal pace, and general guidelines for public speaking.

NIH Annual Job Fair

The ORWH provides support to OITE for the NIH Annual Job Fair, in which more than 800 postdoctoral, research, and clinical fellows participate. The NIH Annual Job Fair is held in conjunction with the NIH Research Festival, which brings in companies that have biomedical research jobs available.

Career Enhancement Seminars

The ORWH supports the OITE Career Enhancement Seminars that are designed to assist postbaccalaureate trainees as they prepare for careers in research. Topics of the seminars include speaking about science, presenting scientific data on posters, preparing for the MCAT and GRE tests, and taking the Myers-Briggs personality inventory.

Poster Day for Postbaccalaureate Trainees

The ORWH provides support for the annual Poster Day for NIH postbaccalaureate trainees, which showcases the work of postbaccalaureate trainees who represent NIH institutes and centers as they present their research accomplishments to the NIH scientific community.

Premed Advising Workshop

The OITE Premed Advising Workshop for postbaccalaureate trainees who plan to apply for admission to medical school and/or M.D./Ph.D. programs is supported by the ORWH. The workshop provides information and helpful tips to follow during the admissions process.

ORWH-FAES-NIH High School Student Summer Program

This summer program for high school students is open to DC metro area students. Each week during the summer, the students met as a group for a lunch-time session where 6-8 of them make presentations on their research. The presence of NIH senior scientific staff at the lunch-time sessions always ensures a lively discussion of each presentation, and helps the students put each research project into a broader biomedical context. All the students are expected to present posters at the NIH Summer Student Poster Presentations day, thereby learning not only how to carry out a research project, but also how to communicate their results to other scientists.

NIH - Israel Program for Israeli Predoctoral Biomedical Researchers

The NIH - Israel Program for Israeli Predoctoral Biomedical Researchers program exposes pre-doctoral Israeli students at the Sackler Medical Faculty at Tel Aviv University (TAU) to the leading research programs in women's health at the NIH in cooperation with the Office of Intramural Research, Fogarty International Center (FIC), and the Office of Research on Women's Health (ORWH) through the Graduate Program Partnerships program. The program facilitates and enhances biomedical research in Israel, the Middle East, and the US, establishes scientific collaborations between Israel and the NIH, and trains promising students for postdoctoral studies at the NIH. Each year, a joint TAU-NIH committee chooses about five of the best students to join the program, who then perform research in the Israeli laboratory (10 months/year) and the NIH laboratory (2 months/year), for three years. The students that participated in the program have covered many aspects of cutting edge research with a special emphasis on women's health.

Howard Hughes Medical Institute (HHMI) Summer Program

In 2000, the ORWH supported the Howard Hughes Medical Institute (HHMI) Summer Program, which gives students who successfully completed an HHMI internship the opportunity to return to the NIH for a second summer. Through the program, returning students further develop or complete their research projects, thus gaining a greater understanding of the total research process. Students are expected to present their research at a conference and submit an abstract for publication as a result of this program.

Outreach Programs

Women's Health Seminar Series

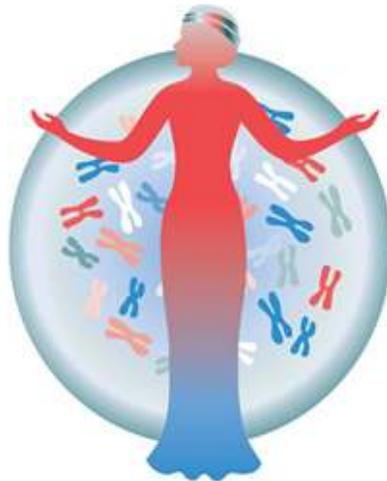
The ORWH Women's Health Seminar Series features nationally recognized leaders in women's health research, both from within the NIH intramural program as well as from the extramural research community, presenting the latest information on topics important to women's health. The Seminar Series began in 1990 and its goal is to educate the NIH community and the public at large on issues that affect the health of women. Every seminar focuses on a current women's health issue and showcases recent research related to that theme. The 2006 seminars focused on Sexually Transmitted Diseases, Caregiving, and Diabetes.

Women's Health Special Interest Group (WHSIG) Seminar Series

The Women's Health Special Interest Group (WHSIG) Seminar Series, sponsored by ORWH, has been held monthly since October 2002. Lectures have been presented by experts in women's health research from within the NIH intramural program as well as the extramural scientific community. The WHSIG Seminar Series is a forum for researchers across the NIH to meet, establish collaborations and learn about sex-based differences beyond the effects of hormones. This lecture series has provided an important forum for scientific interchange and establishment of collaborations between NIH intramural researchers with scientists around the world highlighting an interdisciplinary approach to sex and gender differences in biology and disease from the molecular level to therapeutic clinical trials.

Anita B. Roberts Lecture Series: Distinguished Women at NIH

The NIH Women Scientist Advisors (WSA) Committee, with support from ORWH, just announced a new seminar series to highlight outstanding research achievements of women scientists in the Intramural Research Program at the NIH. The seminar series is dedicated to the memory of Dr. Anita B. Roberts, and honors her role as an exceptional mentor and scientist. The first lecture in the series featured Elizabeth G. Nabel, M.D., Director of National Heart, Lung and Blood Institute and Chief of Vascular Biology and Genomics Section, National Human Genome Research Institute, speaking about Genomic Medicine and Cardiovascular Disease.



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